

Remarks/Arguments:

Claims 7-9 and 11-13 are pending. Applicants acknowledge the Examiner's withdrawal of the prior claim objections in view of the amendment filed March 23, 2009. In view of the remarks that follow, applicants respectfully ask for reconsideration and allowance of the claims.

Rejection of Claims 7, 8, 11, and 12 as Obvious over Tanaka in view of Baeumler and Kitada

Claims 7, 8, 11, and 12 were rejected as obvious over U.S. Patent App. Pub. No. 2003/0140888 to Tanaka in view of U.S. Patent No. 6,823,968 to Baeumler and U.S. Patent No. 4,815,419 to Kitada. Tanaka discloses an in-line configuration engine having dry-sump lubrication, particularly designed for a personal watercraft. See, e.g., Abstract and Figs. 1-4. Baeumler describes a dry-sump lubrication system using an oil separator in a horizontally-opposed engine. Baeumler, col. 1, lines 13-15. Kitada describes an in-line engine having a wet-sump lubrication system. Kitada, Fig. 1.

Claims 7, 8, 11, and 12 are not *prima facie* obvious over the combination of Tanaka, Baeumler, and Kitada, first because one of skill would not have combined Tanaka with Kitada. Kitada describes a wet-sump lubrication system, whereas Tanaka describes a dry-sump system. One of skill would not have adapted the wet-sump oil return system of Kitada to the dry-sump system of Tanaka, as they are fundamentally different lubrication systems.

Tanaka, Baeumler, and Kitada further do not establish *prima facie* obviousness of claims 7, 8, 11, and 12 because the references as a whole do not describe all of the elements of claim 7, and by dependence, claims 8, 11, and 12. Specifically, not one of these references describes the claimed annular space fluidly coupled to a vent connection that is exposed to the atmosphere for defoaming the lubricant oil collected within the annular space. There are no annular spaces around the cylinders to be vented in Tanaka or Baeumler, and the vent 100 in Kitada returns to the crankcase, not to the atmosphere as claimed. Likewise the gas separated from the oil by swirl pots 26, 28 of Baeumler is directed to the crankspace. Baeumler, col. 3, lines 7-10. From there the reference suggests it is directed to the "outside," but this would not be presumed to be the atmosphere, as it is known that the crankcase is ordinarily vented to the intake manifold.

The references as combined further do not describe the claimed oil supply container that is fluidly coupled to the annular space for receiving defoamed lubricant oil from the annular space. There are no annular spaces around the cylinders forming part of the oil return to the wet sump in Tanaka or Baeumler. Kitada's return pipe 100 returns air bubbles to the crankcase from the oil jacket 15 around the cylinders. Kitada at col. 4, lines 66-67, Figs. 1, 6, and 7. Mounting the cylinder block 1 of Kitada atop Tanaka's crankcase and oil tank chambers 8, 9 still does not reach the claims, as the oil returned by the return pipe 100 and the overflow port 24 would flow to the scavenging pumps or expansion chambers of Tanaka, and not the to the oil supply (wet sump) as claimed. Therefore all of the references combined do not contain all of the elements of claim 7, or by dependence, claims 8, 11, or 12.

Regarding claim 8, the Final Action states that an opposed-cylinder engine would be an "obvious alternative" to the in-line engine of Tanaka. The engine of claim 8 would not be an obvious modification of Tanaka in view of Baeumler or any other art of record. A flat, opposed-cylinder configuration would have been unsuitable for Tanaka's intended utility in a personal watercraft. From its drawings and its text at paragraphs [0001] to [0007] one of skill would conclude that an equivalent displacement engine of horizontally-opposed configuration would not fit the narrow, low engine well of Tanaka's personal watercraft. The prior art cannot suggest a modification that would render the engine unsuitable for its intended purpose. M.P.E.P. § 2143.01.V.

Moreover, laying the cylinder block of Kitada on its side would render it inoperative or at least incapable of functioning as it is designed. M.P.E.P. §§ 2143.01.V, 2143.01.VI. A horizontal orientation of Kitada's cylinder head on the side of the return pipe 100 would fill it with oil and disable its primary function of returning air bubbles collected at the upper portion 15A of oil jacket 15 back to the crankcase. Turning Kitada's cylinder head on either side would empty the oil jacket 15 through the overflow port 24 or the return pipe 100, causing the oil jacket to lose its cooling function that is a main object of Kitada's disclosure. *See, e.g.*, Kitada at col. 1, lines 42-52. And connecting Kitada's return pipe 100 or overflow port 24 with Tanaka's oil tank chamber 9 would not have been obvious, either. This arrangement would enable backflow from the wet sump into the oil jacket, particularly in a personal watercraft application, potentially running the wet sump for Tanaka's feed pump 20 dry, and defeating

the entire purpose of the dry-sump system. On these grounds as well, therefore, the rejection of claim 8 as obvious over Tanaka, Baeumler, and Kitada should not be maintained.

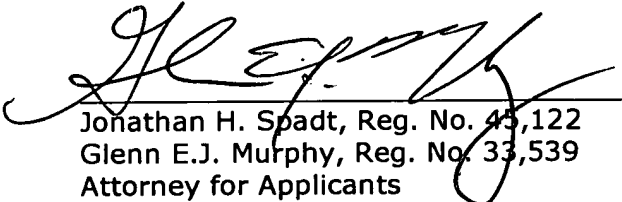
Rejection of Claims 9 and 13 as Obvious over Tanaka, Baeumler, and Kitada, and further in view of Udagawa

Claims 9 and 13, which depend from claim 7, stand rejected as obvious over Tanaka, Baeumler, and Kitada as applied to claims 7, 8, 11, and 12, and further in view of U.S. Patent No. 5,215,316 to Udagawa. Udagawa generally relates to metal laminate gaskets used in open-deck engines. However, Udagawa does not supply any of the elements of claim 7 missing from the combination of Tanaka, Baeumler, and Kitada as detailed above, namely the annular space in fluid communication with a vent connection that is exposed to the atmosphere and the oil supply container that is fluidly coupled to the annular space for receiving defoamed lubricant oil from the annular space. Thus the combination of Tanaka, Baeumler, Kitada, and Udagawa does not establish *prima facie* obviousness of claims 9 or 13, either.

Conclusion:

In view of the remarks above, applicants respectfully ask for reconsideration and allowance of the pending claims.

Respectfully submitted,


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